**Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology**

**(Deemed to be University Estd. u/s 3 of UGC Act, 1956)**

**School of Computing**
**B.Tech. – Computer Science and Engineering**
**VTR UGE2021- (CBCS)**

Academic Year: 2025–2026

SUMMER SEMESTER - SS2526

Course Code  : 10211CS207

Course Name  : Database Management Systems

Slot No : S1L4

# DBMS TASK - 5 REPORT

Title: **Writing Join Queries, equivalent, and/or recursive queries:**

Submitted by:

| VTUNO | REGISTER NUMBER | STUDENT NAME |
|-------|-----------------|--------------|
| VTU28992 | 24UECS0793 | O. SAI MANIKANTA REDDY |

# TASK 5

## Writing Join Queries, equivalent, and/or recursive queries:

(Tool: SQL/ Oracle, ALM: Flipped Classroom)

**Aim:** To Performtheadvancedqueryprocessingandtestitsheuristicsusingdesigningofoptimalcorrelatedand nestedsub queries such as finding summarystatistics.

- To retrieve all cricket boards and their teams.
- To list all matches along with the teams and their captains.
- To count the number of matches played by each team.
- To find all the players who are part of the team named " TIGER ROCK ".
- To retrieve all team details, including the count of winning matches for each team.
- To retrieve the total number of 'Tie' matches in a team-wise manner.
- To retrieve the team details who won the matches.
- To retrieve players and match details of players who are above 25 years old.
- To retrieve the details of Team who have not played any matches.
- To retrieve the teamid, boardid, teamname, and playername for a particular playerid given.

- To retrieve all cricket boards and their teams.

SQL> SELECT cb.Name AS CricketBoard, t.Name AS Team FROM CricketBoard cb JOIN Team t ON cb.BoardID = t.BoardID;

| CricketBoard | Team |
|---|---|
|  |  |

| | |
|---|---|
| Chennai Cricket Board | ABS EXPRESS |
| Chennai Cricket Board | AVG EXPRESS |
| Tiruvallur Cricket Board | ANGRY BARD |
| Tiruvallur Cricket Board | TIGER ROCK |
| Trichy Cricket Board | ROCK |
| Viluppuram Cricket Board | RAINBOW |
| Madurai Cricket Board | PANTHER |
| Tuticorin Cricket Board | THUNDER |
| Selam Cricket Board | EAGLE |
| Tiruppur Cricket Board | KINGS |

• List all matches along with the teams and their captains.

SQL>SELECT m.matchid, m.match_date, m.result, t1.teamid   AS team1_id, t1.name    AS team1_name, t1.captain  AS team1_captain, t2.teamid   AS team2_id, t2.name    AS team2_name, t2.captain  AS team2_captain FROM match m JOIN team t1 ON m.teamid1 = t1.teamid JOIN team t2 ON m.teamid2 = t2.teamid ORDER BY m.matchid;

| MATCHID | MATCH_DAT | RESULT | TEAM1_ID | TEAM1_NAME | TEAM1_CAPTAIN | TEAM2_ID | TEAM2_NAME | TEAM2_CAPTAIN |
|---|---|---|---|---|---|---|---|---|
| M01 | 22-JUN-22 | TCB01 - WIN | CCB01 | ABS EXPRESS | SAMPATH KUMAR | TCB01 | ANGRY BARD | CINIL JOHN |
| M02 | 22-JUN-22 | CCB01 - WIN | CCB02 | AVG EXPRESS | Y.JOHN | TCB02 | TIGER ROCK | BEN GEORGE |
| M03 | 24-JUN-22 | TCB01 - WIN | TRICB01 | ROCK | K.MUTHU | TCB01 | ANGRY BARD | CINIL JOHN |

M04    25-JUN-22 TRICB01 - WIN    TRICB01   ROCK            K.MUTHU                    TCB02    TIGER ROCK          BEN GEORGE
M05    27-JUN-25 TRICB01 - Tie    TRICB01   ROCK      K.MUTHU              TCB02    TIGER ROCK          BEN GEORGE

- Count the number of matches played each team.

SQL>SELECT t.teamid, t.name      AS team_name, COUNT(m.matchid) AS matches_played
FROM team t JOIN match m ON t.teamid = m.teamid1 OR t.teamid = m.teamid2 GROUP BY
t.teamid, t.name ORDER BY matches_played DESC

| TEAMID | TEAM_NAME | MATCHES_PLAYED |
| --- | --- | --- |
| TRICB01 | ROCK | 3 |
| TCB02 | TIGER ROCK | 3 |
| TCB01 | ANGRY BARD | 2 |
| CCB02 | AVG EXPRESS | 1 |
| CCB01 | ABS EXPRESS | 1 |

SQL>

- To find all the players who are part of the team named "TIGER ROCK".

SQL> SELECT p.playerID, p.fname, p.teamID, t.coach, t.captain FROM player p JOIN team t
ON p.teamID = t.teamID WHERE t.name = 'TIGER ROCK';

| PLAYER | FNAME | TEAMID | COACH | CAPTAIN |
| --- | --- | --- | --- | --- |
| 102 | Akash | TCB02 | S.KANNAN | BEN GEORGE |
| 12 | Premkumar | TCB02 | S.KANNAN | BEN GEORGE |

- To retrieve all team details, including the count of winning matches for each team.

SQL> SELECT t.TeamID, t.Name AS TeamName, t.Coach, t.Captain, COUNT(m.MatchID) AS
WinningMatchCount FROM Team t LEFT JOIN Match m ON t.TeamID = substr(m.result,1,5)
GROUP BY t.TeamID, t.Name, t.Coach, t.Captain;

**Output:**

| TEAMID | TEAMNAME | COACH | CAPTAIN | WINNINGMATCHCOUNT |
| --- | --- | --- | --- | --- |

| TRICB01 | ROCK | K.PAUL | K.MUTHU | 0 |
|---|---|---|---|---|
| CCB02 | AVG EXPRESS | T.KARTHIK | Y.JOHN | 0 |
| SCB01 | EAGLE | SOMU | SRI HARI | 0 |
| MCB01 | PANTHER | SARAVANAN | R.SUNILKUMAR | 0 |
| TUCB01 | THUNDER | D ALEX | BARATHI | 0 |
| TCB01 | ANGRY BARD | TOM BABU | CINIL JOHN | 2 |
| VCB01 | RAINBOW | S.RAJESHKUMAR | MANIMARAN | 0 |
| TCB02 | TIGER ROCK | S.KANNAN | BEN GEORGE | 0 |
| CCB01 | ABS EXPRESS | G.D.RAMESH | SAMPATH KUMAR | 1 |
| TICB01 | KINGS | D ANAND | MATHAN | 0 |

10 rows selected.

5.6 To retrieve the total number of 'Tie' matches in a team-wise manner.

SQL>SELECT t.teamid,t.name AS team_name,COUNT(m.matchid) AS tie_matchesFROM team tJOIN match mON (t.teamid = m.teamid1 OR t.teamid = m.teamid2)WHEREUPPER(m.result) LIKE '%TIE%'GROUP BY t.teamid, t.nameORDER BY tie_matches DESC;

```
TEAMID     TEAM_NAME                      TIE_MATCHES
---------- ------------------------------------ -----------

TCB02      TIGER ROCK                1
TRICB01    ROCK                      1
```

5.7. To retrieve the team details who won the matches.

SQL>SELECT DISTINCT t.teamid, t.boardid, t.name     AS team_name, t.coach, t.captainFROM team tJOIN match mON ( (INSTR(m.result, m.teamid1) > 0 AND t.teamid = m.teamid1) OR (INSTR(m.result, m.teamid2) > 0 AND t.teamid = m.teamid2) );

```
TEAMID    BOARDID   TEAM_NAME                   COACH               CAPTAIN
---------- ----------------- ----------------------------- --------------------------- -------------------

TCB01     BID02    ANGRY BARD              TOM BABU        CINIL JOHN
TRICB01   BID04    ROCK                    K.PAUL          K.MUTHU
```

• To retrieve players and match details of players who are above 25 years old.

SQL>SELECT p.playerid,p.fname, p.lname, p.age, p.playingrole,t.teamid,t.name AS team_name,m.matchid,m.match_date,m.resultFROM player pJOIN team t ON p.teamid = t.teamidJOIN match mON (t.teamid = m.teamid1 OR t.teamid = m.teamid2)WHERE p.age > 25

ORDER BY p.playerid, m.matchid;

```
PLAYER FNAME          LNAME          AGE PLAYINGROLE  TEAMID  TEAM_NAME       MATCHID  MATCH_DAT RESULT
------ ----------------- ------------------- ------ ------------ --------- ------------------- ---------------- ------------- ------------------
1    Raj             N              27 Bowler      CCB01   ABS EXPRESS     M01      22-JUN-22 TCB01 - WIN
```

• To retrieve the details of Team who have not played any matches.

SQL>SELECT  t.teamid,t.boardid,t.name        AS  team_name,  t.coach,t.captainFROM  team tWHERE t.teamid NOT IN (SELECT teamid1 FROM matchUNIONSELECT teamid2 FROM match);

| TEAMID | BOARDID | TEAM_NAME | COACH | CAPTAIN |
|--------|---------|-----------|-------|---------|
| VCB01 | BID03 | RAINBOW | S.RAJESHKUMAR | MANIMARAN |
| MCB01 | BID05 | PANTHER | SARAVANAN | R.SUNILKUMAR |
| TUCB01 | BID06 | THUNDER | D ALEX | BARATHI |
| SCB01 | BID07 | EAGLE | SOMU | SRI HARI |
| TICB01 | BID08 | KINGS | D ANAND | MATHAN |

• To retrieve the teamid, boardid, teamname, and playername for a particular playerid given.

SQL> SELECT t.teamid, t.boardid, t.name, p.fname FROM team t JOIN player p ON t.teamid = p.teamid WHERE p.playerid = '66';

| TEAMID | BOARDID | NAME | FNAME |
|--------|---------|------|-------|
| VCB01 | BID03 | RAINBOW | Ganesh |

**Result:**

Thus the query using Join Queries, equivalent, and/or recursive queries has been done successfully.